Claims

1. A communication system comprising a monitor (31), memory (33, 49), a bus (51) and one or more resources (35(i), 37(j), 39(k), 41(m), 43(n), 45(o), 47(p)), said memory (33, 49) being connected to the monitor (31) via said bus (51) and arranged for storing tasks and data, each of said resources (35(i), 37(j), 39(k), 41(m), 43(n), 45(o), 47(p)) being connected to the monitor (31) via said bus (51) and arranged for at least one of performing a function and executing a program, wherein said bus (51) is implemented by a plurality of adjacent sections, each section being implemented as an ASIC connected to a resource.

2. Communication system according to claim 1, wherein said resources (35(i), 37(j), 39(k), 41(m), 43(n), 45(o), 47(p)) that are arranged to execute a program are also arranged to generate trigger signals and send them to the monitor (31), said monitor (31) being arranged to receive said trigger signals, to read one or more tasks related to said trigger signals from said memory (33, 49), to check whether resources required for performing said task are available and sending commands to selected resources specifying the task to be performed via said bus (51).

3. Communication system according to claim 1 or 2, wherein said resources (35(i), 37(j), 39(k), 41(m), 43(n), 45(o), 47(p)) are arranged for mutual communication via said bus (51).

4. Communication system according to any of the preceding claims, wherein using the bus (51) is based on a datagram principle.

5. Communication system according to any of the preceding claims, wherein said memory (33, 49) comprises a task memory (33) and a data memory (49).

6. Communication system according to any of the preceding claims, wherein said monitor (31) comprises a state machine sequencer (79) for handling several state machines in parallel.

7. Communication system according to claim 6, wherein said memory comprises a ROM portion (61) and a RAM portion (59), said ROM portion (61) storing state machine definitions for said state machine sequencer (79), task definitions and default structures, said RAM portion (59) storing dynamic data.

8. Communication system according to claim 7, wherein said RAM portion (59) stores a resource allocation table (63), a data block list (65), and data blocks (67).

9. Communication system according to any of the claims 1-7, wherein said monitor (31) comprises an executor (77) arranged for:

- sending commands to resources;
- sending task block requests to memory (33, 49);
- receiving status information from resources;
- receiving task blocks from memory (33, 49).

10. Communication system according to claim 8, wherein said monitor (31) comprises an executor (77) arranged for:

- sending commands to resources;
- sending task block requests to memory (33, 49);
- receiving status information from resources;
- receiving task blocks from memory (33, 49);
- maintaining said resource allocation table (63).

11. Communication system according to any of the preceding claims, wherein said resources comprises at least one of: a transmitter (35(i)), a receiver (37(j)), an analogue signal manifold (39(k)), a digital analogue converter (41(m)), an analogue digital converter (43(n)), a control unit (45(o)), and a digital signal processor (47(p)).

12. Communication system according to claim 11, wherein said resources comprise at least one digital signal processor (47(p)) storing an executable image for performing a program.

13. Communication system according to any of the preceding claims, wherein said communication system is a radio base unit.

14. Communication system according to any of the preceding claims, wherein each said ASIC comprises a bus control unit (93(r)).

15. Communication system according to any of the preceding claims, wherein communications transmitted via said bus (51) are multiplexed.

16. Communication system according to any of the preceding claims, wherein each said ASIC comprises a matrix structure with a plurality of cross points (95) arranged to couple input lines with output lines.

17. Communication system according to claim 16, wherein said cross points (95) are arranged to allow to isolate a group of input and output lines.

18. Communication system according to claims 16 or 17, wherein said cross points (95) are arranged to allow to shift connections between input and output lines.

19. Communication system according to any of the preceding claims, wherein said bus is arranged on different boards that can be connected to one another.

20. Method of operating a communication system comprising a monitor (31), memory (33, 49), a bus (51) and one or more resources (35(i), 37(j), 39(k), 41(m), 43(n), 45(o), 47(p)), said memory (33, 49) being connected to the monitor (31) via said bus (51) and storing tasks and data, each of said resources (35(i), 37(j), 39(k), 41(m), 43(n), 45(o), 47(p)) being connected to the monitor (31) via said bus (51), said bus (51) being implemented by a plurality of adjacent sections, each section being implemented as an ASIC connected to a resource, said method comprising transmitting communications between said monitor (31), said memory (33, 49) and said one or more resources (35(i), 37(j), 39(k), 41(m), 43(n), 45(o), 47(p)) via said bus (51).

21. Computer program product storing instructions and data to be loaded by a communication system comprising a monitor (31), memory (33, 49), a bus (51) and one or more resources (35(i), 37(j), 39(k), 41(m), 43(n), 45(o), 47(p)), said memory (33, 49) being connected to the monitor (31) via said bus (51) and storing tasks and data, each of said resources (35(i), 37(j), 39(k), 41(m), 43(n), 45(o), 47(p)) being connected to the monitor (31) via said bus (51), said bus (51) being implemented by a plurality of adjacent sections, each section being implemented as an ASIC connected to a resource, said computer program product, after being loaded, allowing said communication system to transmit communications between said monitor (31), said memory (33, 49) and said one or more resources (35(i), 37(j), 39(k), 41(m), 43(n), 45(o), 47(p)) via said bus (51).

22. A data carrier comprising a computer program product according to claim 21.

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